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A revised comprehensive checklist, relational database, and taxonomic system of reference for the bristly millipedes of the world (Diplopoda, Polyxenida)

by

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ABSTRACT

The subclass Penicillata Latreille, 1829 (= Pselaphognatha Latzel, 1884), sister-group of the Chilognatha (Class Diplopoda), comprises a single order (Polyxenida Lucas, 1840; *nomen translatum* Chamberlin & Hoffman, 1958) and four families including tiny, hairy, arthropods (up to 7 mm long) characterised by a soft integument and the presence of numerous and specific trichomes covering the head, the trunk segments and the telson. Previous checklists of polyxenid genera have been provided in several books, but these works were devoted to genus and family group-names, including the types of all published names. A new, comprehensive and updated checklist of Penicillata species is proposed as the catalogue for a relational database and taxonomic system of reference for the Penicillata of the world. This review of the currently known world Penicillata comprises 159 valid species and/or subspecies, including one parthenogenetic form, and seven fossil taxa documented from amber. They belong to four accepted families: Hypogexenidae (1 genus), Lophoproctidae (5 genera), Polyxenidae (19 genera), and Synxenidae (1 genus). Three taxa remain *incertae sedis*. The checklist is documented at the family, genus and species level, and taxa are listed alphabetically. The type-genus of each family and type-species of each genus are preceded by a bold asterisk. Main synonymies or particular observations are detailed for each valid taxa. The checklist is valid up to May 2003. *Penicillata Mundi* is a also a relational database maintained at the MNHN (Paris), which aims to provide a tool for monitoring and mapping the biodiversity of Penicillata. In future, the list will be published on a CIM-webpage and then progressively updated. This is part of a project aiming at providing an updated, comprehensive, list of myriapod groups (Diplopoda-Chilognatha, Chilopoda, Pauropoda and Symphyla) on the CIM-website.

INTRODUCTION

The subclass Penicillata Latreille, 1829 (= Pselaphognatha Latzel, 1884), sister-group of the Chilognatha (Class Diplopoda), comprises a single order (Polyxenida Lucas, 1840) and four families of tiny, hairy, arthropods (up to 7 mm long), characterised by a soft integument and the presence of numerous and specific trichomes covering the head, the trunk segments and the telson (Figs 1, 2).

Polyxenus lagurus, the first representative of the subclass Penicillata (Fig. 1), was originally described by Linnaeus as *Scolopendra lagura* L., 1758 and later became the type-species of the genus *Polyxenus*, originally described as *Pollyxenus* by Latreille (1802/04). Further new genera were named by Silvestri (1899 1900 1903); Brolemann (1917 1931); Attems (1928); Jones (1937 1944); Verhoeff (1939); Chamberlin (1940 1947 1955); Condé (1950 1951*a,b* 1955); Marquet & Condé (1950) and Condé & Jacquemin (1963). In parallel, identification keys for families and genera were proposed by Attems (1926 1928); Verhoeff (1939); Schubart (1947); and the most recent major key for genera by Silvestri (1948).

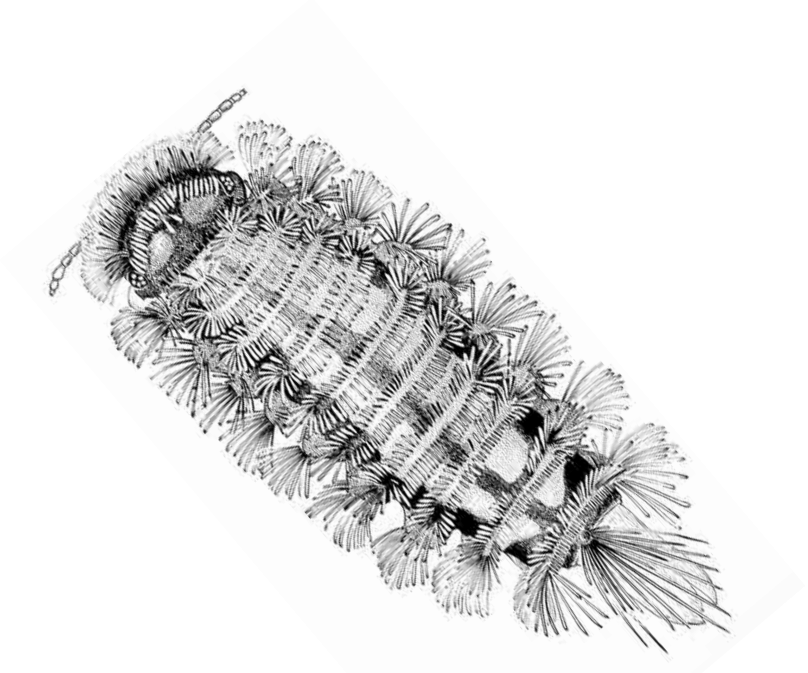

Fig. 1. *Polyxenus lagurus* (Linnaeus, 1758). Habitus of an adult male, bisexual form, dorsal view, after Nguyen Duy - Jacquemin, 1996 (by kind permission of *Millepattia*). Drawing by Maurice Gaillard. Length = 4 mm.

Since this important step, checklists of polyxenid genera have been successively provided in books by Jeekel (1971); Hoffman (1980) and Shelley *et al.* (2000). These works were strictly devoted to genus and family group-names, including the types of all published names in family and genus-groups. A comprehensive and updated checklist of Penicillata species is proposed in the present work as the central catalogue of a relational database and taxonomic system of reference for the Penicillata of the world.

An original habitus of *Propolyxenus forsteri* Condé, 1951 is provided for the first time (Fig. 2).

MATERIAL AND METHODS

The checklist proposed here is composed of taxa accepted as valid in the most recent literature. Some of the taxa at species or generic level should be checked or even revised in the future but this checklist reflects currently accepted validity and synonymies. The checklist is valid up to May 2003, but including new taxa described elsewhere in this volume (Nguyen Duy-Jacquemin 2003).

The checklist lists family, genus and species taxa. Families, genera and species are listed alphabetically and not in the phylogenetic classification of the Penicillata. Bolded asterisks are used ahead of type genera and species. Valid genera and species are bolded. Species names in square parentheses are italicised. The type-species are indicated according to their original designation. (e.g. *Scolopendra lagura* Linnaeus, 1758).

The relational database comprises more than ten related tables, partly completed, linked with the main catalogue-table which gives basic taxonomic and nomenclatural

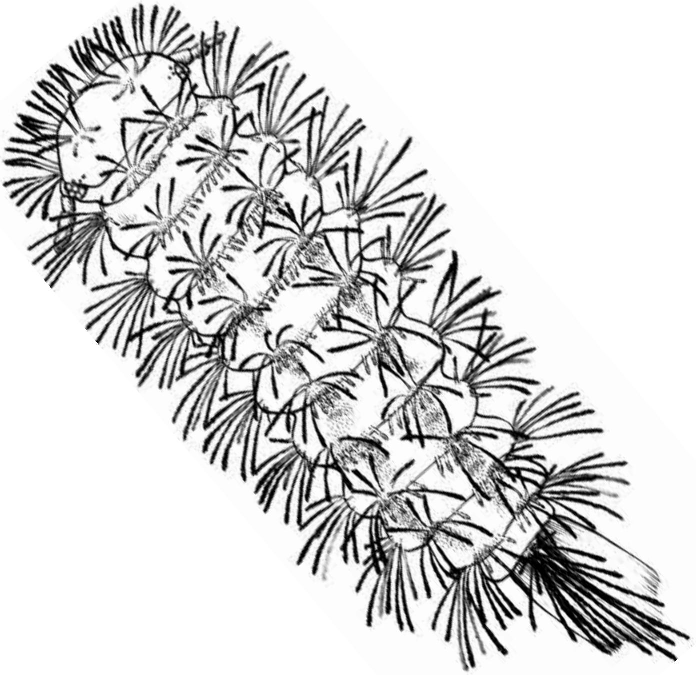

Fig. 2. *Propolyxenus forsteri* Condé, 1951. Habitus of an adult male, dorsal view. Drawing by Christine Beau. Length = 3.5 mm.

information, main synonymies and general distribution in successive data fields of the species form. The present checklist is the result of data extracted from this central catalogue-table. Two other major tables will enrich the data sets dealing with collections and localities. The Penicillata Mundi database was developed on ©4th Dimension 6.7 software running on a G4 Macintosh computer.

CLASSIFICATION OF THE PENICILLATA

The classification and taxonomic richness of the subclass Penicillata (family level) are briefly presented in Table 1. We consider the four families of Polyxenida, classically separated in the two super-families Polyxenoidea Lucas, 1840, including Polyxenidae, Hypogexenidae and Lophoproctidae, and Synxenoidea Silvestri, 1948, including the single family Synxenidae. Several nomenclatural points have been checked and warrant discussion. They are the result of many interesting discussions with myriapodologists, and we hope they will contribute to a definitive consensus for myriapod systematics in the future (Shelley, pers. com., in prep.).

The authority of the Class Diplopoda is usually considered to be either Blainville, or Gervais, or Blainville-Gervais, 1844. Actually, in his thesis published in 1844, Gervais formally credits ‘de Blainville’ as the author of a subclass Diplopoda, elevated later to the rank of class. Unfortunately, Professor de Blainville himself never published his

TABLE 1.

Classification of the Penicillata : hierachical levels (and major synonyms) from Class to Family-level.

- Class Diplopoda de Blainville (in Gervais, 1844)
  - Sub-class Diplopoda de Blainville, 1844 (unpublished course)
  - Sub-class Diplopoda de Blainville & Gervais, 1844 (in Gervais, 1844)
  - Class Diplopoda Gervais, 1849 (*Nomen translatum*)

- Sub-Class Penicillata Latreille, 1831
  - Sub-class Pselaphognatha Latzel, 1884

- Order Polyxenida Lucas, 1840
  - *Nomen translatum* Chamberlin & Hoffman, 1958
  - Ancyrotricha Cook, 1895
  - Schizocephala Verhoeff, 1926
  - Polyxenoidea Verhoeff, 1934

- Super-Family Polyxenoidea Lucas, 1840
  - Family Hypogexenidae Schubart, 1947 [1 genus, 1 species]
  - Family Lophoproctidae Silvestri, 1897 [5 genera, 44 species]
  - Family Polyxenidae Lucas, 1840 [19 genera, 103 species]
    - Pollyxenites Lucas, 1840, 1842, 1851

- Super-Family Synxenoidea Silvestri, 1948
  - Family Synxenidae Silvestri, 1923 [1 genus, 8 species]
    - Phryssonotidae Brölemann & Duboscq, 1915 (invalid)

3 genera and 3 species *Incertae sedis*

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classification and Gervais took the reference from an unpublished work by his professor. De Blainville had some ‘papers’ published as hand-written reports of the ‘Société de Philomatique’, but they must be considered as invalid manuscripts and not properly published. In previous papers (Gervais 1837), the Diplopoda did not appear. In further papers by Gervais (1847 1849), his credit to de Blainville is confirmed. In respect to Gervais’ opinion (1844), we suggest to accept the authorship of the Class Diplopoda as ‘de Blainville in Gervais, 1844’.

The usually acknowledged author of the Subclass Penicillata is Latreille, 1829. During this part of the 19th century, the original papers by Latreille (and others) have been published several times in different and complicated ways. Latreille (1829*a*) and Latreille (1829*b*) show the same content but none of them clearly indicate the taxon Penicillata. We have checked other original papers by Latreille at the Muséum National d’Histoire Naturelle (MNHN) libraries (Paris), but, to our knowledge, no formal reference from Latreille (1829) can be related to Penicillata. On the contrary, in a course published by Latreille (1831), the taxon Penicillata can be recognised, certainly for the first time. According to Shelley (pers. comm.) we strongly recommend crediting Latreille (1831) as the author of the subclass Penicillata. The subclass Pselaphognatha Latzel (Latzel 1884) is a junior synonym.

The usually accepted author of the order Polyxenida is Lucas (1840). This is accepted by authors since Gervais in Walckenaer & Gervais (1847). The original name

'Pollyxénites' was given by Lucas as a family level taxon, confirmed in further editions of the paper from 1842 to 1851. There is no possibility of priority by Gray (1842/43) (in Jones & Gray 1843), who used the name for the family Polyxenidae. The name has been transferred from the family-group level to the order-group level, and an order Polyxenida erected by Chamberlin & Hoffman (1958), that could be a serious alternative authority to Lucas (1840). The other possibility of an earlier use of an ordinal name based on the genus *Polyxenus* comes from the erection of the order 'Polyxenoidea' by Verhoeff (1934). The International Code of Zoological Nomenclature does not address the ordinal level and we do not have a definitive opinion. However, we suggest retaining Lucas (1840) as the author of the order Polyxenida [cf. Jeekel (1971); Hoffman (1980)] to maintain stability in the myriapodological literature.

The family Hypogexenidae, erected by Schubart (1947) comprises a single genus *Hypogexenus* Silvestri, 1903, based on the single type-species *H. pusillus* Silvestri, 1903. It shows some features clearly related to the Polyxenidae: external (= outer) palpi of the gnathochilarium (despite their short size), and telotarsi (cf. Condé 1955), explaining why Silvestri decided to maintain the genus inside the Polyxenidae. On the contrary, the characters of being blind, depigmented and having the VIIIth antennal article slightly shorter than the VIIth article, seem to link them to the Lophoproctidae, in which Verhoeff (1939) includes *Hypogexenus*. Schubart (1947) did not hesitate in creating the new family, even though this taxon is based on very weak and ill-defined traits.

CHECKLIST OF THE PENICILLATA

The main results of this work are presented as the comprehensive checklist below. This review of the currently known Penicillata of the world comprises 159 valid species and/or subspecies, including one parthenogenetic form and seven fossil taxa documented from amber. They belong to four accepted families: Hypogexenidae (1 genus), Lophoproctidae (5 genera), Polyxenidae (19 genera), Synxenidae (1 genus). Three genera and three species remain *incertae sedis*.

Major synonymies and some short comments are given in the list. Nevertheless, several points deserve brief comments.

According to Condé (1950), the genus *Ankistroxenus* Attems, 1907 was considered by Hoffman (1980) to be of uncertain status and family position. It cannot be included in any family except perhaps the Polyxenidae, in which we provisionally place it, despite the uncertain status and position of the genus and the two species.

The parthenogenetic race of *Polyxenus lagurus* does not represent a proper taxon, having neither systematic nor nomenclatural identity. It can represent parthenogenetic populations, variety or form, or could be considered after further investigations as a possible subspecies. We decided to include this item in the list because of its considerable biological and biogeographical interest in the western European faunas. The sexual form is represented in figure 1.

Polyxenus lagurus caucasicus Lignau, 1924 and *Polyxenus sokolowi* Lignau, 1924 were largely ignored in the current Penicillata literature. Described by Lignau (1924) as a variety and a new species, they have mostly been listed by Lohmander (1936) and their status remains uncertain. Both obviously deserve to be re-examined and compared with related species of *Polyxenus*, using morphological features unfortunately not considered in the original diagnosis, such as antennal sensilla.

'*Japonixenus*' (Ishii & Tamura (1995 1996; Ishii (1997) is an invalidly proposed genus and cannot be listed with the valid genera. It has been cited or suggested by Ishii & Tamura (1995 1996), then Ishii (1997) without diagnosis and designation of a type-species. The species potentially belonging to this so-called genus are still included in the genus *Polyxenus*.

Phryssonotus burmiticus (Cockerell, 1917), originally described as a fossil *Polyxenus* from amber, is formally included in the family Synxenidae. After previous considerations by Condé (1954), recent investigations on the type-material (Rasnitsyn & Ross 2000; Ross & York 2000; Rasnitsyn & Quicke 2002), and examination of the amber inclusion, we conclude that the species belongs to the genus *Phryssonotus*, as previously proposed by Condé & Nguyen (1963).

PENICILLATA MUNDI: A RELATIONAL DATABASE: TOWARDS A TAXONOMIC SYSTEM OF REFERENCE

Penicillata Mundi is the name of a relational database maintained at the MNHN (Paris), which aims to provide a tool for monitoring and mapping the biodiversity of Penicillata. It is based on an original structure developed for monitoring and managing the biodiversity of French myriapods: *Fauna Gallica Myriapoda* (Geoffroy 1996*a*,*b*). The tables used are linked to the catalogue of taxa, collections, localities, authors of taxa and references. During the development phase of the project, the data base is accessible on computers at the MNHN (Paris and Brunoy).

Beyond the updated checklist of valid species, it is planned to improve the database by additional data sets dealing with illustrations, localities and more precise distribution of species. In addition, the taxonomic fields will be developed and linked to create a taxonomic system of reference for Penicillata, integrating subjective and objective synonymies, chresonymies, and use of names in the literature.

CONCLUSION AND PERSPECTIVES

Despite the modest richness of the group, compared for instance to Polydesmida or Lithobiomorpha, the order Polyxenida shows recent interesting discoveries that bring new insights to research on this taxon.

Twenty species have been newly described since 1990 (Ishii 1990; Ishii & Liang 1990; Ishii, Nguyen Duy-Jacquemin & Condé 1999; Ishii & Yin 2000; Nguyen Duy-Jacquemin 1996; Nguyen Duy-Jacquemin 2002) and several other ones published in this volume (Nguyen Duy-Jacquemin 2003).

Important redescriptions have been made and new combinations explained and confirmed recently, i.e. *Ancistroxenus comans* (Ishii *et al* 1999), *Lophoturus* spp. (Condé & Nguyen Duy-Jacquemin 1977), *Macroxenodes poecilus* (Condé & Nguyen Duy-Jacquemin 1987), *Phryssonotus* spp. (Condé 1954; Condé & Nguyen 1963).

New areas in the world for research on Penicillata have been identified in East-Asia (Japan, Korea, China, Taiwan), South America (Brazil, Venezuela), Southern Africa (Namibia, South Africa), and the Pacific (Australia, New Zealand). They will most probably provide new taxa and new insights into the classification of the Penicillata.

In the future, the present checklist will be published on a CIM-webpage and then progressively updated. This is part of a project aimed at providing, on the CIM-website, the updated comprehensive list of myriapod groups (Diplopoda-Chilognatha, Chilopoda, Pauropoda and Symphyla).

Depending on future developments, it is also planned to make the database available on the web, so as to be made accessible and consulted by web-navigators.

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Penicillata Mundi: Alphabetical checklist of the Penicillata families, genera and species of the world. Type genera and type species are preceded by a bold asterisk. Valid taxa are bolded and not italicised. Different generic combinations and synonyms are non-bolded, italicised and given in square parentheses.

Class **DIPLOPODA** de Blainville (in Gervais, 1844)

Sub-Class **Penicillata** Latreille, 1831 [= Pselaphognatha Latzel, 1884]

Order **Polyxenida** Lucas, 1840 [*Nomen translatum* Chamberlin & Hoffman, 1958; = Ancyrotricha Cook, 1895; Schizocephala Verhoeff, 1926; Polyxenoidea, Verhoeff, 1934]

Hypogexenidae Schubart, 1947 [Status uncertain]

***Hypogexenus** Silvestri, 1903
    ***pusillus** Silvestri, 1903

Lophoproctidae Silvestri, 1897

Alloproctoides Marquet & Condé, 1950
    dawydoffi (Attems, 1938) [= *Monographis kraepelini dawydoffi* Attems, 1938; *Alloproctoides simulans* Marquet & Condé, 1950]
    dawydoffi sineligulatus Nguyen Duy-Jacquemin & Condé, 1982
    ***remyi** Marquet & Condé, 1950
    xenochilus Nguyen Duy-Jacquemin & Condé, 1982
Ancistroxenus Schubart, 1947 [= *Plesioproctus* Condé, 1964]
    comans (Loomis, 1934) [= *Lophoproctus comans* Loomis, 1934; *Plesioproctus comans* (Loomis, 1934); *****Ancistroxenus tupiensis** Schubart, 1947]
    obscurisetus (Silvestri, 1898) [= *Lophoproctus obscuriseta* Silvestri, 1898; *Plesioproctus obscurisetus* (Silvestri, 1898)]

Lophoproctinus Silvestri, 1948
- **chichinii** Condé, 1951
- **diversunguis** Silvestri, 1949
- **inferus** (Silvestri, 1903) [= *Lophoproctus inferus* Silvestri, 1903]
- **inferus maurus** (Marquet & Condé, 1950) [= *Lophoproctinus inferus* var. *maurus* Marquet & Condé, 1950; ?*Lophoproctinus inferus* (Silvestri, 1903)]
- **mexicanus** Silvestri, 1949
- **notandus** Silvestri, 1949

***Lophoproctus** Pocock, 1894
- ***coecus** Pocock, 1894 [= *Lophoproctus lucidus* Auct.]
- **jeanneli** (Brölemann, 1910) [= *Polyxenus lucidus* var. *jeanneli* Brölemann, 1910; *Lophoproctus lucidus jeanneli* (Brölemann, 1910)]
- **jeanneli litoralis** (Verhoeff, 1952) [= *Lophoproctus litoralis* Verhoeff, 1952]
- **lucidus** (Chalande, 1888) [= *Pollyxenus lucidus* Chalande, 1888; *Polyxenus lucidus* Chalande, 1888]
- **pagesi** Condé, 1982

Lophoturus Brolemann, 1931 [= *Alloproctus* Silvestri, 1948 (preoccupied); *Alloproctinus* Jeekel, 1963; *Oroxenus* Chamberlin, 1955]
- **adisi** Ishii, Nguyen Duy-Jacquemin & Condé, 1999
- **aequatus** (Loomis, 1936) [= *Lophoproctus aequatus* Loomis, 1936; *Alloproctinus aequatus* (Loomis, 1936)]
- **anisorhabdus** (Condé & Terver, 1964) [= *Alloproctinus anisorhabdus* Condé & Terver, 1964]
- **crassipes** Condé & Terver, 1979
- **danhomenou** (Brolemann, 1926) [= *Lophoproctus danhomenou* Brolemann, 1926; *Alloproctus danhomenou* (Brolemann, 1926)]
- **difficilis** (Condé & Jacquemin, 1963) [= *Alloproctus difficilis* Condé & Jacquemin, 1963]
- **drifti** (Condé & Terver, 1964) [= *Alloproctinus drifti* Condé & Terver, 1964]
- **fluctuans** (Condé & Terver, 1964) [= *Alloproctinus fluctuans* Condé & Terver, 1964]
- **guineensis** (Silvestri, 1948) [= *Alloproctus guineensis* Silvestri, 1948; *Alloproctinus guineensis* (Silvestri, 1948)]
- **hesperius** (Condé & Terver, 1963) [= *Alloproctus hesperius* Condé & Terver, 1963]
- **jianshuiensis** Ishii & Yin, 2000
- **judsoni** Nguyen Duy-Jacquemin, 2002
- **longisetis** (Pocock, 1894) [= *Polyxenus longisetis* Pocock, 1894]
- **longisetis scopiger** Condé & Terver, 1979
- **madecassus** (Marquet & Condé, 1950) [= *Alloproctus madecassus* Marquet & Condé, 1950]
- **monserratensis** Nguyen Duy-Jacquemin, 2002
- **niveus** (Loomis, 1934) [= *Lophoproctus niveus* Loomis, 1934; *Alloproctinus niveus* (Loomis, 1934)]
- **obscurus** (Brolemann, 1931) [= **Lophoproctus obscurus* Brolemann, 1931]
- **obscurus catalai** Condé & Nguyen Duy-Jacquemin, 1977
- **obscurus kurtchevae** Nguyen Duy-Jacquemin & Condé, 1982
- **obscurus tongae** Nguyen Duy-Jacquemin & Condé, 1982
- **okinawai** (Nguyen Duy-Jacquemin & Condé, 1982) [= *Lophoturus obscurus okinawai* Nguyen Duy - Jacquemin & Condé, 1982]
- **peruanus** (Silvestri, 1949) [= *Alloproctus peruanus* Silvestri, 1949(48)]
- **quebradanus** (Chamberlin, 1955) [= *Oroxenus quebradanus* Chamberlin, 1955]
- **queenslandicus** (Verhoeff, 1924) [= *Lophoproctus queenslandicus* Verhoeff, 1924]
- **sturmi** Nguyen Duy-Jacquemin, 2002
- **vicarius** Condé & Terver, 1979

Polyxenidae Lucas, 1840 [Latzel, 1884] [= Pollyxénites Lucas, 1840]

Afraustraloxenodes Nguyen Duy-Jacquemin, 2003
- **coineaui** Nguyen Duy-Jacquemin, 2003
- **hulleyi** Nguyen Duy-Jacquemin, 2003
- ***namibiensis** Nguyen Duy-Jacquemin, 2003
- **schultzei** (Attems, 1909) [= *Monographis schultzei* Attems, 1909; *Chilexenus schultzei* (Attems, 1909)]

Ankistroxenus Attems, 1907 [uncertain status and position]
- **aethiopicus** (Chalande, 1908) [= *Pollyxenus aethiopicus* Chalande, 1908; *Polyxenus*

aethiopicus Chalande, 1908; ?*Ankistroxenus minutus* Attems, 1907]
***minutus** Attems, 1907

Anopsxenus Condé & Jacquemin, 1963
caboverdus Nguyen Duy-Jacquemin, 1996
***indicus** Condé & Jacquemin, 1963

Apoxenus Chamberlin, 1947
***micronesius** Chamberlin, 1947 [= *Apoxenus floricolens* Chamberlin, 1947 (*nomen nudum*)]

Chilexenus Silvestri, 1948
rosendinus (Silvestri, 1903) [= **Polyxenus rosendinus* Silvestri, 1903]

Eudigraphis Silvestri, 1948
sinensis Ishii & Liang, 1990
taiwaniensis Ishii, 1990
takakuwai kinutensis (Haga, 1950) [= *Monographis takakuwai kinutensis* Haga, 1950 (in Takashima & Haga, 1950); *Eudigraphis kinutensis* (Haga, 1950)]
takakuwai nigricans (Miyosi, 1947) [= *Monographis takakuwai nigricans* Miyosi, 1947; *Eudigraphis nigricans* (Miyosi, 1947)]
takakuwai takakuwai (Miyosi, 1947) [= *Monographis takakuwai* Miyosi, 1947; *Monographis takakuwai takakuwai* Miyosi, 1947; *Eudigraphis takakuwai* (Miyosi, 1947); **Eudigraphis japonica* Silvestri, 1948]
xishuangbanna Ishii & Yin, 2000

'Japonixenus', invalidly proposed by Ishii & Tamura, 1995; Ishii, 1997

Macroxenodes Silvestri, 1948
amazonicus Ishii, Nguyen Duy-Jacquemin & Condé, 1999
bartschi (Chamberlin, 1922) [= *Polyxenus bartschi* Chamberlin, 1922]
meinerti (Silvestri, 1898) [= **Polyxenus meinerti* Silvestri, 1898]
poecilus (Chamberlin, 1923) [= *Polyxenus poecilus* Chamberlin, 1923]

Macroxenus Brölemann, 1917
caingangensis (Schubart, 1944) [= *Monographis cainganensis* Schubart, 1944]
enghoffi Nguyen Duy-Jacquemin, 1996
rubromarginatus (Lucas, 1846) [= **Polyxenus rubromarginatus* Lucas, 1846]

Mauritixenus Verhoeff, 1939
betschi Nguyen Duy & Condé, 1969
betschi retusus Nguyen Duy & Condé, 1969
borbonicus (Condé & Jacquemin, 1962) [= *Monographis borbonicus* Condé & Jacquemin, 1962]
***gracilicornis** Verhoeff, 1939
pauliani (Condé & Jacquemin, 1962) [= *Monographis pauliani* Condé & Jacquemin, 1962]
sakalavus (Marquet & Condé, 1950) [= *Monographis sakalavus* Marquet & Condé, 1950]
vachoni Nguyen Duy & Condé, 1969

Mesoxenontus Silvestri, 1948
***primus** Silvestri, 1948

Miopsxenus Condé, 1951
***mootyi** Condé, 1951
schubarti Jacquemin & Condé, 1964

Monographis Attems, 1907 [= *Allographis* Silvestri, 1948]
annandalei (Silvestri, 1948) [= *Allographis annandalei* Silvestri, 1948]
baihualingensis Ishii & Yin, 2000
demangei Nguyen Duy-Jacquemin & Condé, 1967
***kraepelini** Attems, 1907

kraepelini malayanus Condé & Nguyen Duy-Jacquemin, 1984 [= *Monographis cf. kraepelini* Nguyen Duy-Jacquemin & Condé, 1967]
kraepelini sabahnus Condé & Nguyen Duy-Jacquemin, 1984
mirus (Turk, 1947) [= *Saroxenus mirus* Turk, 1947; *Allographis mirus* (Turk, 1947)]
tamoyoensis Schubart, 1939 [= *Allographis tamoyoensis* (Schubart, 1939)]
yunnanensis Ishii & Yin, 2000

Pauropsxenus Silvestri, 1948
brachyartema (Brolemann, 1920) [= *Ankistroxenus brachyartema* Brolemann, 1920]
brachyartema evansi Nguyen Duy-Jacquemin & Condé, 1965
brachyartema silvestrii Marquet & Condé, 1950 [= *Pauropsxenus brachyartema* var. *silvestrii* Marquet & Condé, 1950]
laboratus (Attems, 1953) [= *Mauritixenus laboratus* Attems, 1953]
***vilhenae** Silvestri, 1948

***Polyxenus** Latreille 1802/1803 [= *Pollyxenus* Latreille 1802/1803 (sic!)]
albus Pocock, 1894
anacapensis Pierce, 1940
anophthalius Ishii & Yin, 2000
caudatus Menge, 1854 [† amber; uncertain status and position]
chalcidicus Condé & Nguyen Duy-Jacquemin, 1971
chilensis Silvestri, 1903
colurus Menge, 1854 [† amber; uncertain status and position]
conformis Koch & Berendt, 1854 [† amber; uncertain status and position]
fasciculatus Say, 1821 [= *Polyxenus lagurus* Auct.]
fasciculatus pallidus Ryder, 1878 [uncertain status and position; *Polyxenes* (sic) *fasciculatus* var. *pallidus* Ryder, 1878; ?*Polyxenus fasciculatus* Say, 1821]
fasciculatus victoriensis Pierce, 1940 [uncertain status and position, ?var.; ?*Polyxenus fasciculatus* Say, 1821]
germanicus Verhoeff, 1941 [?= *Polyxenus lagurus* (Linnaeus, 1758)]
hangzhoensis Ishii & Liang, 1990 [= ‘*Japonixenus*’ *hangzhoensis* (Ishii & Liang, 1990)]
hawaiiensis Silvestri, 1904
koreanus Ishii & Choi, 1988
lagurus (Linnaeus, 1758) [= ******Scolopendra lagura* Linnaeus, 1758; *Pollyxenus lagurus* (Linnaeus, 1758); *Iulus lagurus* (Linnaeus, 1758); *Iulus penicillatus* De Geer]
lagurus (parthenogenetic race) [?= *Polyxenus lagurus* (Linnaeus, 1758)]
lagurus caucasicus Lignau, 1924 [= *Polyxenus lagurus* var. *caucasicus* Lignau, 1924; uncertain subspecific status]
lapidicola Silvestri, 1903
lepagei Mello-Leitão, 1925
lophurus Menge, 1854 [† amber; uncertain status and position]
macedonicus Verhoeff, 1952
oromii Nguyen Duy-Jacquemin, 1996
ovalis Koch & Berendt, 1854 [† amber; uncertain status and position]
paraguayensis Silvestri, 1903
platensis Silvestri, 1903
ponticus Lignau, 1903 [= *Polyxenus argentifer* Verhoeff, 1921]
pugetensis Kincaid, 1898
rossi Chamberlin, 1957
senex Mello-Leitão, 1925
shinoharai Ishii, 1983 [= ‘*Japonixenus*’ *shinoharai* (Ishii, 1983)]
sokolowi Lignau, 1924
superbus Silvestri, 1903
triocellatus Ishii & Yin, 2000
tuberculatus Pierce, 1940 [uncertain status and position]

Propolyxenus Silvestri, 1948
***aegeus** Silvestri, 1948
crassisetosus Marquet & Condé, 1950
forsteri Condé, 1951

lawrencei Condé, 1949
patagonicus (Silvestri, 1903) [= *Polyxenus patagonicus* Silvestri, 1903]
trivittatus (Verhoeff, 1941) [= *Polyxenus trivittatus* Verhoeff, 1941]

Saroxenus Cook, 1896 [= ?*Ankistroxenus* Attems, 1907]
actinolophus (Lignau, 1924) [= *Polyxenus actinolophus* Lignau, 1924]
alluaudi (Brolemann, 1920) [= *Ankistroxenus alluaudi* Brolemann, 1920; *Monographis kraepelini* Attems 1939 non *Monographis kraepelini* Attems, 1907]
alluaudi occidentalis (Brolemann, 1926) [= *Ankistroxenus alluaudi* var. *occidentalis* Brolemann, 1926; *Saroxenus alluaudi* var. *occidentalis* (Brolemann, 1926)]
angolanus Silvestri, 1948
***scandens** Cook, 1896

Silvestrus Jones, 1937 [= *Silvestrius*: Silvestri 1948; *Silvestrius* Auct.]
brevipalpus (Condé & Jacquemin, 1962) [= *Silvestrius brevipalpus* Condé & Jacquemin, 1962]
ceylonicus (Pocock, 1892) [= *Polyxenus ceylonicus* Pocock, 1892]
***seminudus** Jones, 1937 [= *Silvestrius seminudus* (Jones, 1937)]

Typhloxenus Condé, 1955
***mirificus** Condé, 1955
modestus Condé, 1959

Unixenus Jones, 1944 [= *Monoxenus* Jones, 1937 (preoccupied)]
attemsi Nguyen Duy-Jacquemin & Condé, 1967 [= *Monographis schultzei* pro parte: sensu Attems, 1911, non *Monographis schultzei* pro parte Attems, 1909]
brölemanni (Condé & Jacquemin, 1962) [= *Saroxenus brölemanni* Condé & Jacquemin, 1962]
mjöbergi (Verhoeff, 1924) [= *Monographis mjöbergi* Verhoeff, 1924]
padmanabhii (Jones, 1937) [= ******Monoxenus padmanabhii* Jones, 1937]
vuillaumei (Condé & Terver, 1963) [= *Saroxenus vuillaumei* Condé & Terver, 1963]

Synxenidae Silvestri, 1923 [= Phryssonotidae Brölemann & Duboscq, 1915, invalid]

Phryssonotus Scudder, 1885 [= ******Synxenus* Silvestri, 1900; *Kubanus* Attems, 1926; *Koubanus* Attems, 1928; *Schindalmonotus* Attems, 1928; *Lophonotus* Menge, 1854, preoccupied, non Stephens, 1829; *Kaubanus* (sic) Attems, 1929, misprint by Jones (1937); *Schindelmonatus* (sic) Attems, 1929, misprint by Jones (1937)]
burmiticus (Cockerell, 1917) [= *Polyxenus burmiticus* Cockerell, 1917; Ẏ amber]
capensis (Silvestri, 1923) [= *Synxenus capensis* Silvestri, 1923; ?*Schindalmonotus hystrix* Attems, 1928]
chilensis (Silvestri, 1948) [= *Synxenus chilensis* Silvestri, 1948]
cubanus (Silvestri, 1948) [= *Synxenus cubanus* Silvestri, 1948]
hystrix (Menge, 1854) [= ******Lophonotus hystrix* Menge, 1854 Ẏ amber; non *Schindalmonotus hystrix* Attems, 1928]
novaehollandiae (Silvestri, 1923) [= *Synxenus novaehollandiae* Silvestri, 1923]
orientalis (Silvestri, 1900) [= *Synxenus orientalis* Silvestri, 1900]
platycephalus (Lucas, 1846) [= *Polyxenus platycephalus* Lucas, 1846; *Koubanus platycephalus* (Lucas, 1846); *Synxenus platycephalus* (Lucas, 1846)]

Polyxenida incertae sedis

Barroxenus Chamberlin, 1940
***panamanus** Chamberlin, 1940

Polyxenella Rajulu, 1963
***krishnani** Rajulu, 1963 [Originally described as a symphylid]

Trichoproctus Silvestri, 1899
***biroi** Silvestri, 1899